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Achieving WIL placement and theoretical learning concurrently: An online strategy for Higher Education Institutions

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The Australian Government requires Higher Education Institutions to demonstrate the work-readiness of graduates. Consequently, Work Integrated Learning (WIL) has been adopted to enhance the workplace skills and professional networks of students to improve graduate employability. While WIL can take many forms, experiences located in workplaces (placements, internships) have been popular. The introduction of the Australian Government's Fair Work Act 2009 required that placements be tightly embedded within curriculum thereby presenting the challenge of how to enable WIL via placements and theoretical learning in already compact study programs. As a response, we present the pragmatic use of online theoretical instruction and online WIL assessment within an undergraduate core Capstone business subject, as an enabler of the WIL placement. We examine learner perspectives on, and grade outcomes from, undertaking online theoretical instruction concurrent with WIL placements to discuss the key WIL and online learning design implications for this cohort of learners. Our findings are increasingly pertinent given the 2017 Australian Government Higher Education Reform package incentivising the expansion of WIL into all degrees.

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Introduction

Since the early 2000s, to address skills shortages, the Australian Government has required higher-education institutions to demonstrate the work-readiness of graduates (Patrick et al. 2008; Brown 2010). These institutions have responded by introducing work-integrated learning (WIL): a pedagogical approach to the integration of theoretical and practical knowledge to enhance the transition from study into the workplace (Patrick et al. 2008; Smith 2012; Jackson 2015). Although many institutions have commonly adopted workplace experiences, students can be placed not just at the nexus of curriculum and workplace learning, but also at that of the legislation governing higher-education institutions and employment law. For example, changes to Australian employment regulations – principally the introduction of the Federal Government's Fair Work Act 1999 – question the legality of student placements detached from a curriculum. The Act and associated guidelines maintain that in any placements for students:

> The person must not be doing productive work; the main benefit of the arrangement should be to the person doing the placement; and it must be clear that the person is receiving a meaningful learning experience, training or skill development (Fair Work Ombudsman 2017, p. 1).

This suggests that any higher-education WIL placement must combine workplace learning with theoretical learning connected to the curriculum of a degree, even in degrees without a vocational focus where spending time in the profession is not a compulsory requirement (Stewart & Owens 2013). The challenge then becomes creating the "space" in curriculum for students to engage in WIL in their profession's workplace, fundamental to achieving WIL placement outcomes, concurrent with achieving the theoretical learning outcomes of the curriculum. Woodley and Beattie (2011) propose online environments as a "de-situated" space that might enable students to engage in university and workplace learning concurrently. In response, we investigated the potential for, and effectiveness of, concurrent WIL and online theoretical instruction, by investigating final-year undergraduate business students engaged in a 16-day WIL placement concurrent with a 13-week theoretical capstone subject.

Capstone subjects are designed to help students draw together their learning from distinct facets of their study program and consolidate it to be ready for graduation and professional employment (Schroetter & Wendler 2008); as WIL achieves similar outcomes, it was a particularly appropriate addition as a capstone subject. While, increasingly, capstone subjects in business degrees contain an element of real-world industry experience (see Lang & McNaught 2013), the challenge was how to deliver the common capstone theoretical content to WIL students out on placement. This ultimately led to the design, development and implementation of Work-Integrated Learning with Content and Assessment Online (WILCAO).

Students in business higher education should put into practice what they learn in the classroom (Wrenn & Wrenn 2009); students do this best when they are active learners integrating thinking and acting (Boud et al. 1993). However, we considered that the integration of theoretical content with WIL would be challenging, as WIL often requires students to engage in a different type of learning practice; specifically, reflective learning is often strongly associated with WIL. Fundamentally, the subject must be based on the premise that reflection is pivotal to enhancing insights and learning (Thorpe 2004), and that this reflection builds WIL students' awareness to enhance their academic knowledge, skill development and lifelong learning (Harvey et al. 2010).

Prior research had identified that the reflective practice critical to supporting WIL was achievable in the online environment: "online assessments are endorsed as critical learning opportunities for students to iteratively look back on their actions to consider or record improvements as well as to 'practise reflective practice'" (Sheridan et al. 2014, p. 335). Moreover, Lewis and Harrison (2012) suggest that computer-assisted teaching, in the form of online delivery, can be a very effective tool to facilitate student success, as online learning may overcome "some of the confines of traditional lecture formats" (p. 75). Indeed, Michael (2012) argues that online learning provides flexibility to the learner and educator with respect to location, time and study environment as "students are able to attend the online class at any time, from anywhere" (p. 160).

Furthermore, it is notable that today's students are not the people the traditional education system was designed to teach: they depend on communication technologies for accessing information and interacting with others (Oblinger & Oblinger 2005). Similarly, DiLullo et al. (2012) maintain that students use social media, digital media and communication technologies to interact and to organise their personal lives. Online education can potentially enable students to use these familiar media (such as YouTube, Google and blogs) to "organize their digital materials, accomplishments, and connections [which] supports transfer of learning beyond the classroom" (p. 222).

This said, while current-generation learners might be ideal candidates to trial online learning approaches, Bonk and Graham (2006) argue that online learning environments in higher education still raise more questions than answers. In a recent literature review investigating the effectiveness of online learning, Nguyen suggests that "online learning is at least as effective as the traditional format, but the evidence is, by no means, conclusive" (2015, p. 316). However, Jaggars and Xu (2016) state that the approach to design and teaching of online courses plays a critical role in their effectiveness. Importantly, this paper articulates the WIL learning principles, explains the online approach (WILCAO) and evaluates its role in student learning.

Work-integrated learning with content and assessment online

An online environment was used to integrate WIL-placement-related reflective practice with capstone theoretical content. For the theory content, the decision was made to strive for pedagogically informed practice using the technologies and resources institutionally available to the teaching team at the time. The design and teaching team recognised that online course delivery required intentional design beyond simply distributing duplicated face-to-face classroom content online (Grandzol & Grandzol 2006; Jaggars & Xu 2016).

The development of this instructional aspect of WILCAO followed the Dynamic Systems Development Method (DSDM): an iterative and incremental approach that embraces principles of agile development (Stapleton 1997). The five-phase approach (Figure 1) provided a structured framework that let us construct and maintain software systems and to prototype and make incremental design improvements within tight timeframes (Sani et al. 2013).

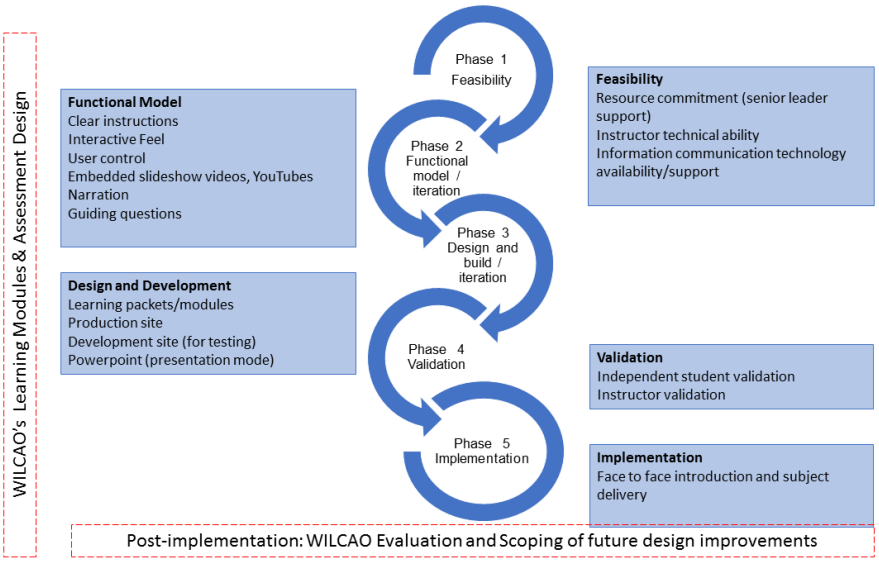

Figure 1. Integration of WILCAO and DSDM model for software development (adapted from Stapleton 1997)

In addition to the five phases of the framework, a post-implementation review phase was included in accordance with Sani et al. (2013), the study that informed this academic paper.

Phase 1 – feasibility

During the feasibility phase we set out the rationale for the project, identified resourcing availability, considered available technologies and overall functionalities and developed a high-level plan (Stapleton 1997; Sani et al. 2013). MacKeogh and Fox (2008) argue that lack of time, concerns over loss of academic control and fear of change reduce motivation to adopt online learning environments, and should be addressed. These concerns and risks to the adoption of the WILCAO approach were mitigated by ensuring teacher involvement in all stages of DSDM. This ensured verification and validation of the design and development prior to implementation.

Michael (2012) echoes Song et al. (2004) in that technical challenges must be considered when implementing new online learning tools. The identification of the limitations of the available technologies ensured that content was designed to optimise what could be technologically achieved. Pickett and Fraser (2010) point out that a teacher's level of experience can be a challenge to implementing new teaching technologies; thus we sought additional support for teachers from specialist learning designers. Finally, support from senior academics (Head of School and Dean) was pivotal to funding WILCAO's development.

Phase 2 – functional model

While WILCAO creators sought an online learning environment where students could be "interactive learning participants" (Park 2011, p. 179), and wanted to include synchronous elements to achieve a "truly premier e-learning course" (Castle & McGuire 2010, p. 38), there were challenges: ensuring consistency between both capstone subjects meant content could not be modified in any significant way; and students' diverse placement schedules meant students could not be online at the same time. As synchronous delivery was not a feasible option, we decided that

WILCAO would be comprised of static, non-changing and non-interactive content; the focus then became creating the most engaging static online content possible.

Evans and Champion (2007) recommend providing clear instructions and engaging students using tools that resemble "live" activity. They encourage the use of embedded PowerPoint presentations, screen shots and video clips. The idea of creating an interactive feel with the user participating by clicking in and out – having control over what they wanted to see, and in what order – became central to WILCAO.

We carefully considered the extensive overview of recommendations for online practice by Grandzol and Grandzol (2006). The integration of online education best practice, via its conceptual integration into WILCAO, is outlined in Table 1. For example, the final structure was made relatively consistent across its learning packets (the PowerPoint presenter files developed to address each core concept) and, as recommended, the whole package was finished before being taught to ensure this consistency. Narration with the recommended conversational tone was integrated.

Table 1. Comparison between online education engagement techniques (Grandzol & Grandzol 2006) and WILCAO's theoretical instruction

	Description of desired practice*	WILCAO
1	A consistent structure is vital for online success – this allows students to learn new material without learning a new structure for each course.	We designed for overall consistency in structure across the learning packets.
2	Courses should be complete on the day class starts.	We completed the entire series of learning packets before they were released simultaneously online.
3	The online environment fosters a teaching style that is learning-centred, instead of teaching-centred. Therefore time is redirected from covering content to facilitating student learning (with the help of a mentor or coach).	Complemented by reflective assessment where the teacher could mentor students through their theoretical and workplace-based learning.
4	Navigational documents and instructions should be included that specifically tell students where to go and what to do next.	Learning designers worked with WILCAO designers to establish instructional resources. Moreover, voice narration was designed to guide students as they clicked in and out of learning resources in each learning packet.
5	Course time commitments should be matched to evaluation.	We sought to reflect a balance between theoretical learning and workplace-based learning in assessment. The theoretical learning was still a substantial commitment when considering the workplace component; however, we were careful to design assessments that incorporated equal amounts of theory and practice.
6	Instructors should add something new every two to three days to keep the class moving.	Although the overall design was static, the reflective assessment facilitated regular communication between the student and teacher.
7	The course should be clean of accidental postings and empty documents.	The course was carefully packaged to contain relevant resources within the learning packet so there would be no redundant files.
9	The number of hyperlinks per page should be limited.	The number of hyperlinks was minimised by imbedding links seamlessly in the learning packet so that students could click in and out.
12	Self-assessments should be used.	The course used guiding questions as informal self-assessment to prompt students to reflect on learning.
13	Instructors should give prompt and constructive feedback.	The reflective assessment facilitated regular communication between student and teacher, incorporating prompt and constructive (mentoring) feedback.
19	Explanations of animations (such as PowerPoint	The course incorporated conversational narration with the

	slides) should be presented in a conversational spoken form instead of text form, and narration and animation should be simultaneous. The learner should be able to control the pace of the presentation.	PowerPoint slides and discussion of the other learning resources as students proceeded through each learning packet. Students, however, could not control the pace of an individual presentation (learning packet), as the narration controlled the pace. This said, they could control the pace of learning across the learning packets, as these were all made available simultaneously at the beginning of the course.
20	An orientation to the class, including welcome, contact information, evaluation procedures etc., should be included.	A face-to-face workshop introduced WILCAO and explained it in context.
22	Human tutors should be available.	There were some face-to-face workshops as well as face-to-face tutor consultation hours.
26	An outside or peer reviewer should evaluate the course.	WILCAO designers worked with learning designers from the university's Academic Services Division who could provide a different perspective and peer-review the learning packets.
28	The design should incorporate variety: some students do better with PowerPoint slides while others prefer text outlines. A cyclic design, whereby each lesson has elements of interest to all learning styles (i.e. text readings, case studies, journals and research projects), should be considered.	The course used a multimodal approach to deliver albeit static content that focused on communicating ideas in different ways rather than simply downloading content to students.
29	The use of multimedia, especially video, should be limited to minimise transfer and bandwidth issues.	The course balanced video with PowerPoint dot points, photos and other resources (such as webpages) to reduce file size to the most appropriate for the learning required. It could also be downloaded as an entire learning packet of 11 modules, which could reduce interruptions in student learning.
31	As promoted by a number of researchers, the course should be organised using a modular system of curricular design because it builds on concepts of social learning, mental processing and systems thinking.	Delivered in 11 learning packets (modules).

At the conclusion of this review of online engagement educational approaches, the functional model evolved.

Phase 3 – design and development

WILCAO's theoretical instruction required reconceptualising of the existing capstone content, which at that time was delivered to other capstone students via a traditional lecture, into an online offering that could achieve equivalence of learning outcomes. WILCAO came to comprise 11 learning packets: each one a discrete multimodal experience equivalent to one traditional lecture. As a starting point, the traditional PowerPoint lecture slides provided a framework around with digital content could be integrated. The traditional lectures already contained the subject content, expert information and pertinent case studies; however, WILCAO required additional resources that would allow students to explore topics. Therefore, links to additional resources including reports, journal articles, You Tube videos, news articles and study hints were added.

During Autumn semester 2011, the physical lectures were video recorded. Snippets of the videos were added to the online learning packets; as a variety of academics presented the capstone subject that semester, WILCAO now contained video snippets of a variety of speakers. Subsequently, the full video recordings were played back and the key topics, themes and discussions were transcribed. Voice narration was added to each slide in each learning packet, as recommended by

Grandzol and Grandzol (2006). The words used were approved by each presenter; however, it was decided that a common voice be used for the recordings to provide consistency and familiarity. The result was a narrated PowerPoint show with written notes that enabled students to move through the capstone content while watching videos and clicking in and out to relevant external learning resources on the internet.

The choice of learning-design software included Adobe Presenter, Microsoft PowerPoint, Lectora and Articulate Online. A trial of each of these resulted in the selection of Microsoft PowerPoint as the software most compatible with the university's existing learning environment. PowerPoint presentations could be stored in the UOW student online learning environment, and they allowed for the creation of non-modifiable presentations, compressed the lectures into an appropriate file size and were compatible with a variety of internet browsers and computer software. Learning packets were published in Microsoft PowerPoint set in "presentation mode".

Phase 4 –validation

While testing was integrated throughout each module of the DSDM, due to the rapid development timeframe, final user operational validation was desirable prior to implementation. Certainly, Sargent (2013) argues that there is a much greater likelihood that others will accept the model as valid if independent validation takes place. An ideal group of students to test WILCAO were those who had been enrolled in the WIL subject one semester prior to the introduction of the capstone content. These students (called "validators") were best placed to understand the WIL context and provide feedback on the delivery strategy and potential student uptake of the digital content.

To this end, 61 Spring 2012 students were invited to engage, with 20 volunteering. Subsequently, two versions of the WILCAO learning packets were made available, and validators had access to a test site hosting Versions 1 and 2 of the learning packets. Hosted on e-learning, Version 1 contained content without narration, while Version 2 was hosted on an alternate repository system (Equella) and contained narration. The purpose was to test the ability of students off campus to open files from both repository systems (e-learning and Equella) and, subsequently, received their feedback on the content and the associated use of narration.

Validators had two weeks during which they could access the learning packet on the testing site and were invited to an informal focus-group feedback session. The general consensus from the group was that WILCAO had great potential to fulfil the logistical and learning needs of students engaged in a work placement while undertaking capstone curriculum content. Table 2 presents the overarching themes of the discussion along with the actions designers took to integrate their feedback during the implementation phase.

Phase 5 – implementation

WILCAO was first implemented with 51 business students in Autumn semester (March to June) 2013. Students were introduced to WILCAO via an online tour presented by the subject lecturer in a face-to-face workshop focused mainly on providing an internship briefing. These same students were invited to participate in the initial evaluation of WILCAO's efficacy in achieving theoretical learning concurrent with WIL.

Table 2. Online education best practice, compared with student feedback and the theoretical instruction component of WILCAO's subsequent adaptation

Discussion theme	Student feedback	WILCAO adaptation
Ability to download WILCAO learning packets	PC computer users could download from both repositories whereas Mac computers were compatible with the e-learning environment, but not Equella.	All files would be hosted on e-learning for implementation and the file format would be changed to PowerPoint Presenter rather than a heavier, but more user-friendly, format supported by Equella.
Ability to open the learning packets	As WILCAO was designed in the most recent version of the software, a number of PC and Mac users were required to do a number of software updates prior to being able to open the learning packets. However, they were not required to repeat this task on subsequent attempts to open the packets.	A note was made in the user guide that users may need to update their computer's software prior to viewing the content.
Multimodal functionality	Overall, students were impressed by the multimodal approach, including (but not limited to) PowerPoint slides, videos of lecturers and YouTube. This said, for some students, clicking out to YouTube videos was disruptive if their internet connection speed dropped, as this was the only part of the package that could not be downloaded in the learning packet.	While the ability to download YouTube videos existed and was considered, due to copyright reasons this had to be abandoned. The user guide mentioned the occasional issues that might arise concerning internet speed. Use of university systems was encouraged for off-campus students experiencing this issue as a back-up strategy during early implementation stages.
PowerPoint slide feature functionality	Version 2 with narration led to requests for a stop-and-start function for each slide, as students wanted to be able to stop at the conclusion of a slide rather than have narration continue across PowerPoint slides.	The original play-all presentation approach was redesigned to make each PowerPoint slide independently narrated and replayable.
Voice narration	The majority of students enjoyed the voice narration, saying that it kept them engaged and prompted their learning. A few students felt that it interrupted their learning by not allowing them to think about things, but they were satisfied with "switching it off" using the volume control of their computer.	Due to the overwhelmingly positive comments about the voice narration, it was kept for implementation. The ability to switch it on and off formally within WILCAO rather than using computer controls was instigated for those students who might not like engagement with narration.

WILCAO's assessment design

To complement the theoretical instructional design of WILCAO, online facilitated assessment was used to integrate the WIL placement with the capstone theoretical content. At the core of WIL is the transfer of theoretical learning into practice (McNamara 2013). Smith (2012) maintains that the design of WIL experiences should engage students in learning experiences that are authentic

and enable students to "to apply and learn disciplinary knowledge and skills in a real-world context" (p. 247). Similarly, Jackson (2015), drawing on the work of Billett (2011), maintains that the integration of student learning from the workplace and subject/degree curriculum is critical for students to make links between all their learning experiences and better understand the requirements of their professional practice.

Beck and Halim (2008) suggest that reflective learning is a useful mechanism for achieving this. Smith (2012) also recognises reflective practice through journaling as a learning activity appropriate for WIL. Moreover, the asynchronous nature of the online, according to Castle and McGuire (2010), can stimulate self-reflective learning. This meant that the asynchronous nature of WILCAO could fit well and enhance WIL outcomes.

To this end, the capstone subjects came to share one common assessment: an essay worth 35% of the overall grade, where students applied the theoretical concepts (as presented in the curriculum) to the issues posed in a newspaper article (they were given four articles to choose from). This was done as a benchmarking exercise in which all capstone students demonstrated theory-derived learning via a piece of sustained writing.

As reflection is integral to WIL, the second assessment (30% weighting) transitioned from the elective subject to the WIL capstone. The first part of the assessment required students to outline their expectations prior to undertaking their placements. The second part required them to reflect on their expectations compared with their actual learnings and outcomes upon conclusion of their placement. They were given resources on reflective practice and encouraged to journal throughout their internship.

A final assessment (weighted 35%) was specifically designed to interrelate capstone theoretical content with WIL. Students were to apply theoretical concepts in the curriculum to what was observed and experienced in the workplace. Drawing both on critical thinking and reflection, students were to critique the internship host organisations' activities relative to the theoretical content on the United Nations Global Compact Principles on Human Rights, Labour, Environment and Anti-corruption.

Methodology

WILCAO's effectiveness in achieving concurrent WIL and theoretical learning outcomes was evaluated in two ways: by garnering student perspectives on the delivery of the theoretical instruction and which online engagement tactics contributed to, or detracted from, their learning; and by analysing subject and assessment grades for the WIL cohort, and the simulation alternative, to ensure that theory-based learning and WIL learning outcomes were attained.

A purpose-designed online qualitative questionnaire was issued to the 51 students enrolled in the first iteration of the WIL capstone in Autumn semester 2013. The questions solicited student perspectives on their interaction with WILCAO before exploring their perceptions of specific aspects of its learning design (narration, YouTube videos, videos of university lecturers speaking on a topic, guiding questions, case studies and explanation and summary of the lecture topic). In line with the ethics approval (HE13/276), and to reduce bias, email invitations to participate in the questionnaire were sent after the release of student grades, with an independent research assistant distributing the student survey link. The quantitative subject and assessment-level grades data were derived from the Autumn 2013 WIL subject cohort as well as the other Autumn 2013 capstone subject cohort (business simulation) to enable comparison.

Findings

The qualitative survey response rate was 29% (with 15 out of the 51 enrolled students undertaking the online survey, and 11 responding to all questions). To differentiate between participants, each was allocated a unique code, with A13 indicating that they belonged to the Autumn semester student cohort. A number was then arbitrarily selected for each participant (e.g., A13-1, A13-2).

Overall student attitudes towards WILCAO's theoretical instruction

Students expressed confidence in accessing the subject's academic content online and found that accessing the learning materials was simple: "All the information was there and easy to access" (A13-2). This said, as this was the first time using these heavy digital video files in Moodle (the learning platform), there were technical glitches for some students, with one commenting: "The online learning structure was really good but some of the content could only be viewed via a PC computer" (A13-8). When it was convenient to a student, however, there was a positive uptake and they implied that the content was easy to engage with: "The information was clearly stated in all online lectures" (A13-10).

When asked to discuss if each learning packet provided a sufficient overview of the week's subject material, one student commented: "I felt like the online lectures [WILCAO] were the material for each week" (A13-7). However, another commented that "it was very difficult to gain a concise answer on all topics solely based on the online lectures [WILCAO]" (A13-**4**). This comment may reflect the challenging nature of the capstone content and the student's inability to briefly peruse the content, as the presentation style of the learning packet meant that students could not skip straight through to the summative statements.

Some students would have preferred class, as they found online content "boring, hard to sit through" (A13-3), that there was "not enough clarification and [it was] confusing at times" (A13-4), and they struggled with self-motivation: "[A]s it isn't 'compulsory' to attend I sometimes got lazy with listening to them [PowerPoints with narration]" (A13-10). Others suggested that they might adapt to an online learning approach, "getting used to the Moodle site" (A13-1)

While many students seemed confident to learn using the WILCAO approach, the designers considered that the feedback as a whole suggested that technical glitches and even poor internet connection can affect the learning experience (Evans & Champion 2007); consequently, working to ensure the compatibility of software and IT systems has been an ongoing imperative in subsequent design.

Although some students will always struggle with self-motivation online (Hubbard 1998) and motivation may be key to self-directed learning readiness (Heo & Han 2018; Butz & Stupnisky 2016), particularly as this capstone is taken as part of an undergraduate, degree learning analytics could be adopted to identify students at risk of not engaging with content.

Student control of WILCAO's pace

In the design and implementation phase, it was decided that learning packets would be made available all at once to enable students to move through the content at their own pace: "I really liked the material being available from the start so we could all work at our own pace and when it suited our timetables…" (A13-6). Indeed, flexibility and increased time efficiency were commonly perceived as a benefit of WILCAO.

Students often mentioned the ability to pace the overall rhythm of viewing – watching one weekly or a couple at a time – at a time and place of the student's choosing: "I did different work hours each week so it was very useful to be able to access them when it suited me best" (A13-2) and "I found this to be a fantastic way to learn the subject matter for this subject because of the nature of the internship and the frantic schedule it allowed for self-paced work and I did most of this on a weekend when I had the most time to absorb the lecture content and make my reflections" (A13-9).

That students had the ability to progress at their own pace being positive concurs with Thorton (1999 cited in Grandzol & Grandzol, 2006). Hubbard (1998) states that online courses are advantageous because they give students the opportunity to control their learning environment; this is seen both in the WILCAO approach and in the students' comments. Cater et al. (2012) suggest that online study is not just convenient but provides equitable geographical access to the learning materials – potentially relevant here where students were travelling to a variety of WIL placement workplaces from different home districts. Overall, as per Castle and McGuire (2010), WILCAO has facilitated flexible and extensive access to the capstone learning content.

However, self-paced at the macro level did not mean that students had the ability to control the speed of any particular WILCAO packet's delivery. Each packet had a particular number of slides with narrated content, videos, reflective questions and summaries. Some students liked the way the content was presented to them, as it was "good to be able to pause and take notes when I needed" (A13-1), whereas other students "… couldn't progress as fast as [they] liked because the narration was slow" (A13-2). This implies that when students were not rushed and were keen to engage with the content, the rhythm of the lectures was appropriate; however, where students tried to skim materials (for any number of reasons), it was too slow.

Controlling the pace at the micro level does appear to have "forced" students to engage with the content, particularly as assessment was closely linked to the online content. On the other hand, the designers were also aware that some students did identify technical issues that could be overcome to enhance the student online lecture experience. For example, one student noted the need for "[a] play/pause button which doesn't reload the whole slide from the start. This was really frustrating when I had to keep starting the slides right from the start when I wanted to pause and take notes" (A13-7). This very practical and reasonable suggestion was implemented in future design.

Online tactics to enhance content learning

As per Evans and Champion (2007), we decided that a number of different tools and techniques could be applied to the online environment with a view to enhancing student learning; narration, YouTube videos, videos of lecturers presenting in the lecture hall, reflective questions posed through the presentation, case studies and explanations and summaries of the content at the conclusion of key topics. Students were then asked to comment on the usefulness of each of these to their learning.

Narration: As the capstone content is complex and is being presented to students using a range of online media (words, pictures, videos), the designers decided to see if a narrator, as recommended by Grandzol and Grandzol (2006), could be a useful guide for students. This project's "validators" mostly liked the narration but, interestingly, this did not entirely carry over into the week-to-week experience of capstone content WIL students. While most of the students found it useful – "Helped explain the slides that weren't supported by a video of the lecturer. Also helped me keep my place in the lecture 'slide show'" (A13-6) – others had a different experience, stating that "sometimes I found the voice annoying to listen to but it is nice to be able to listen to a lecture" (A13-1). This implies that it may be monotonous to have the same narrator across all lectures and,

as mentioned earlier, some students found that it interfered with setting their own pace for the lecture: "I would rather it have been written down so that I could read it at my own pace. The narration was spoken too slow and I found myself getting bored when waiting for it to finish" (A13-2). In future design iterations, changes to this aspect of the narration could be implemented, with additional functionality that allowed students to turn narration on or off to best suit their preferences.

Integration of YouTube videos: Students commented that YouTube videos were useful to their learning – "They often showed 'real life' examples! This put the material into perspective" (A13-7) – and some students found them a "[g]ood way to explain the content" (A13-10). However, other students saw them as a "nice break from listening to the same voice constantly" (A13-2), which suggests that they merely provided variety to maintain interest in the online content rather than sparking learning connections per se.

Videos of lecturers: When the videos were of lecturers presenting to other students in a classroom setting, student commented that it was useful to their learning: "I felt like you were in a normal lecture hall with other students when watching these videos" (A13-7). This implies that these videos enabled students to feel part of the classroom community with their peers. Others felt that seeing lecturers presenting their opinions was most valuable, and "it gave the perspective of what was being discussed and their own personal interpretation" (A13-9).

Guiding questions: One person strongly disliked guiding questions: "I don't really feel like these questions were really that helpful in my learning. I liked the two questions on the workplace in regards to our tasks…" (A13-7). Here the student is referring to the reflective questions contained within the assessment relating to their work placement. Indeed, a number of students commented that the reflection aspect of assessments relating to their internships was more useful to their learning than the guiding questions focused on content. While Means et al. (2010) suggested that online guiding questions stimulated learning, this was not a conclusive finding of this research. It may well be that other components of the reflective assessment (e.g. instruction sheet, learning packets) may have achieved this outcome for students in this WIL context.

Case studies: When reflecting on case studies, one student wrote, "I enjoyed learning about the case studies and applying them to the theory" (A13-1), and another that "[t]hey provided extra information to support what we had learnt in the lecture" (A13-7). These two comments matched the design objectives; however, some students found that "there were only certain points in some that were extremely relevant…" (A13-9). Again, if a student was keen to glean only the most pertinent information, rather than go through the full learning process as designed, the case studies may not have seemed so important.

Learning Summaries: Not everyone found reviews useful in the online environment; comments included "Did not add nor detract from my learning" (A13-1) and "still confusing having no face to face contact" (A13-4) – perhaps these learners missed the consolidation of learning that may be achieved via peer interaction.

Overall, the multimodal approach to static content recommended by Evans and Champion (2007) does appear to have been effective for theoretical instruction, but some elements were more positively received than others. It is clear that students most positively commented on the content-delivery aspects (video snippets – particularly those of lecturers presenting to other students – and case studies) compared to comments on narration and summaries of topics; this seemed more to reflect personal taste than learning effectiveness. Guided questions did not receive such positive feedback, and their use should be reconsidered, particularly if students are already undertaking reflective journaling as part of WIL; the students in this study commented that the latter was more effective for learning.

The next section examines whether the subject's assessment, designed to complement WILCAO's theoretical instruction, maximised student learning as determined from consideration of the students' assessment grades.

WIL and theory-based assessment

In the final subject grades (Figure 2), all WIL capstone students passed, and almost half the students (25 of 51) reached Distinction level with a final grade over 75%. The validity and reliability of these results should be reasonable, with four experienced academics being involved in marking assessments and moderation between markers taking place. While it would have been useful to compare results with prior cohorts of elective subject students, the fact that the previous cohorts' assessment was based on a satisfactory/unsatisfactory marking schema, results were not comparable across semesters.

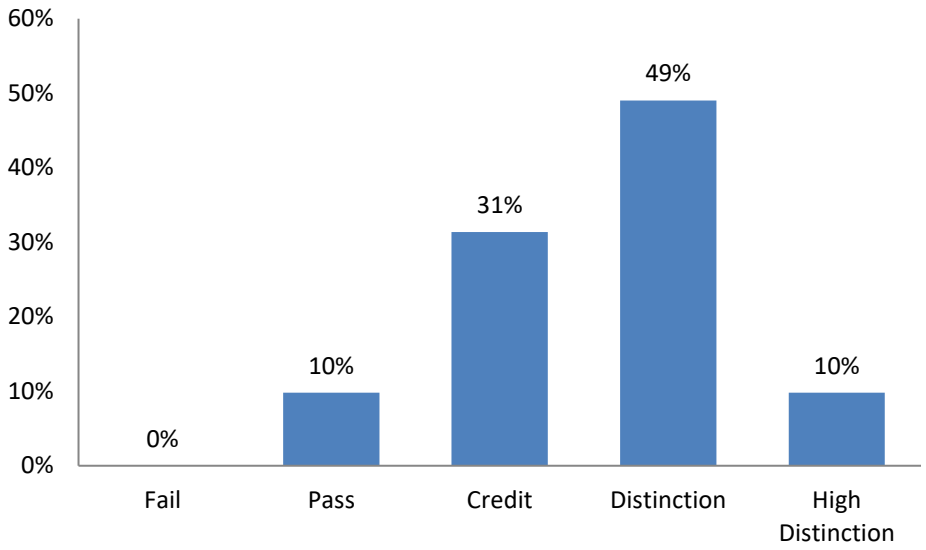

Figure 2. Overall subject results for WIL capstone Autumn 2013 cohort (N=51)

For the capstone common essay (worth 35% of the overall grade), WIL students who participated in virtual lectures and submitted the assessment online did better on the whole than the alternate capstone business-simulation students who attended lectures and tutorials (Figure 3 compares the two cohorts' grades for this assessment).

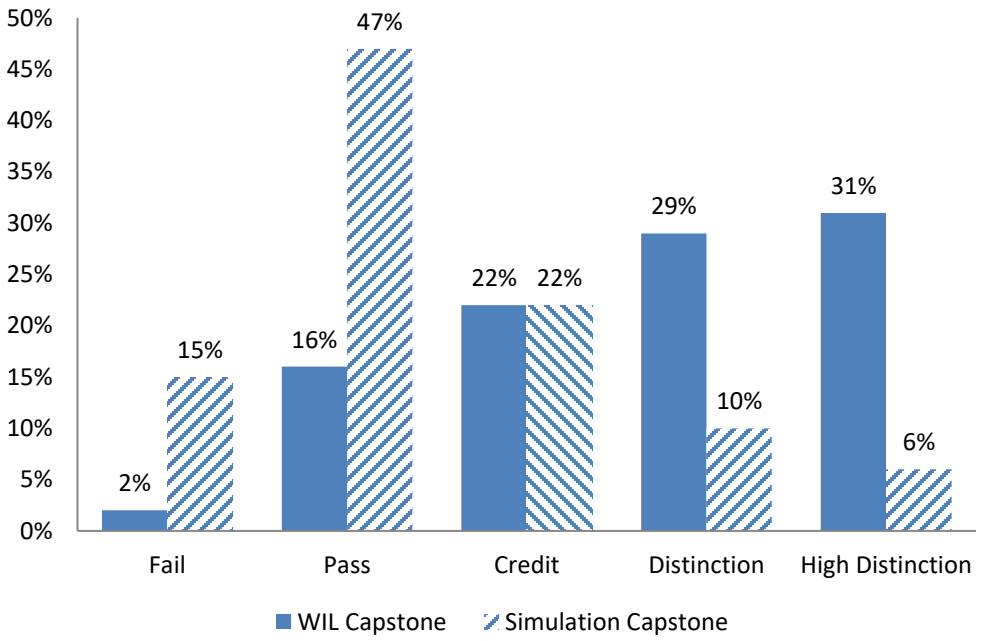

Figure 3. Common essay assessment WIL capstone (N=51) versus simulation capstone learner (N= 324) results for Autumn 2013 cohort

This said, better overall grades in the WIL capstone does not imply that online was better than the classroom. It might be argued that the WIL cohort may have been different to the majority of business students and, indeed, they were proactive students, as they sought out an optional internship. What these data do confirm, however, was that the online environment did not disadvantage the WIL capstone students' theoretical learning.

In considering the WIL-specific reflective assessment (Figure 4), overall, the WIL capstone students all passed, and almost half (25 of 51) achieved Distinction level or above. This assessment (worth 30%) required them to compare their expectations prior to their internship with actual learnings and outcomes at the conclusion of the placement. These grades reflected well on WIL outcomes.

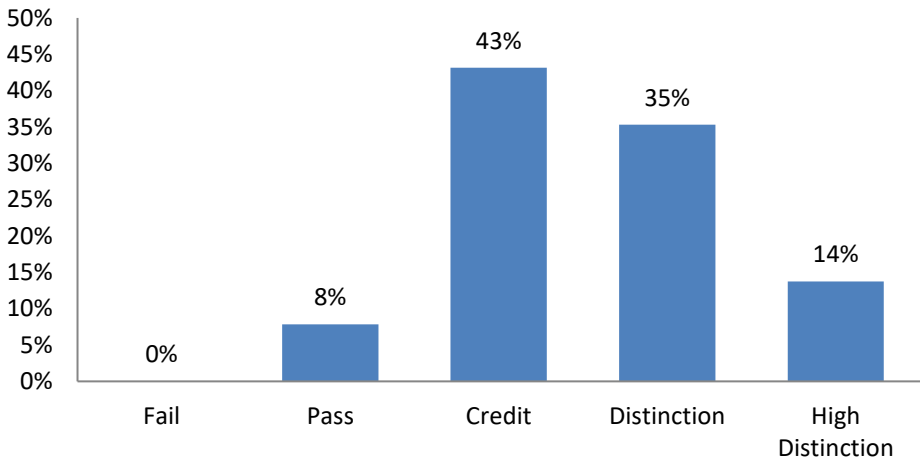

Figure 4. Autumn 2013 cohort WIL capstone student assessment results for WIL reflective assessment (N=51)

For the final assessment (worth 35%), designed to integrate theory-based learning and WIL, the overall results were good, with 25 of 51 students achieving a Distinction level or above (Figure 5). In fact, more students achieved a High Distinction than in the previous WIL reflective assessment, suggesting that they could easily accomplish both theoretical learning and workplace-derived learning by the end of semester.

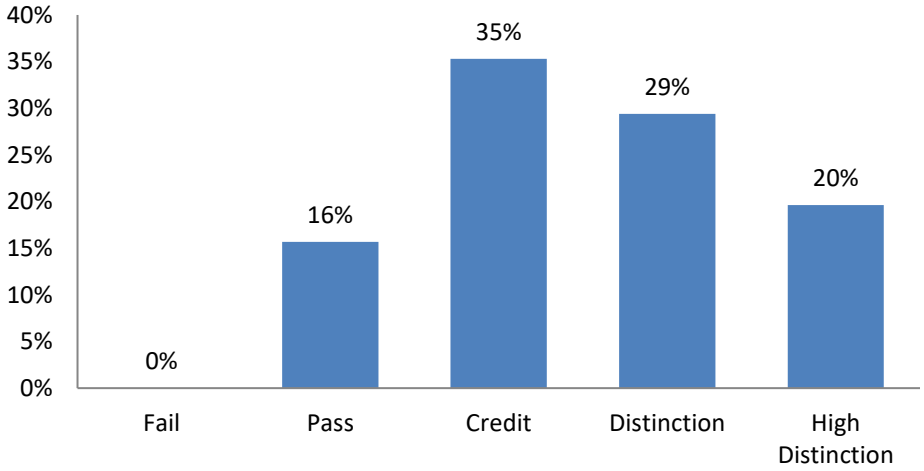

Figure 5. Autumn 2013 cohort WIL capstone student assessment results for final integrated theory and WIL assessment (N=51)

Overall, it would appear from grade results that the WIL capstone students did achieve both theoretical and WIL learning outcomes, and that delivering theoretical curriculum online via WILCAO was effective.

Discussion

This research set out to investigate the potential for and effectiveness of concurrent WIL and online theoretical instruction for final-year undergraduate business higher-education students. The results highlight a number of issues. First, a deeper consideration of WILCAO's theoretical instruction component is required, based on Grandzol and Grandzol's (2006) approach to online educational practice, which potentially enabled the theoretical learning. Several of the 31 desired practices (Table 1) emerged as important based on students' comments.

The design features that contributed most to student satisfaction included a "*consistent structure*", evident in the ease of uptake of the learning environment, and having a "*complete course*" up and running on the first day, as internship students tended to download all content immediately to fit it in with their internship requirements; this addressed elements 1 and 2 of Grandzol and Grandzol's (2006) recommended practices.

Grandzol and Grandzol's (2006, p. 9) element 3, "The online environment fosters a teaching style that is learning centred, instead of teaching-centred. Therefore re-direct time from covering content to facilitating student learning (mentor or coach)", appeared to be lacking in the design of the WILCAO, as implied by students' comments on summaries of lecture topics that showed they felt a need to be in the classroom rather than experiencing the same richness online.

Students did not raise elements 4 to 18; however, element 19, "Present explanations of animations (such as PowerPoint slides) in spoken form instead of text form. Simultaneously present narration and animation Narrate in a conversational tone Allow the learning to have control over the pace of the presentation" (p. 10), clearly evoked considerable student feedback. It is worth noting that explanations through the use of simultaneous narration and self-paced presentation control received mixed results. Business internship students, due to their time restrictions and expectations of quality, liked the self-paced aspect of the design, but wanted narration to be optional.

Next considered was element 28, "Build in variety". Some students did better with PowerPoint slides while others preferred text outlines. The element recommended to "[c]onsider using a cyclic design whereby each lesson has elements of interest to all learning styles (i.e. text readings, case studies, journals and research projects)" (p. 11). This was shown by the popularity of videos of lecturers presenting material and of the use of case studies; the latter's popularity may have been due to the relationship between a working student and the real-life examples found within case studies. Determining the optimal types of case studies requires further research.

Element 29, "Be careful using too much multimedia, especially video, because of transfer issues" (p. 11), was generally addressed by students' positive responses regarding the overall usability of WILCAO, while element 31, "There are several different ways to organise online courses. Several researchers promote the modular system of curricular design because it builds on concepts of social learning, mental processing and systems thinking" (p. 11), was reflected in student feedback regarding the suitability of WILCAO delivery content in learning packets (for example, A13-8's comments, above).

WILCAO attempted to respond to effective online learning practices at the time, and students commented positively on many elements of this approach. Some elements that were more part of

teaching practice, such as having content reviewed by others, were not at the forefront of students' minds, and therefore students did not tend to comment on them.

Having critiqued the learning design elements, we can now reflect on learner outcomes. The WIL engaged students performed better than the rest of the capstone cohort (Figure 3). It may be that those students performed better because they were more ambitious learners (as shown by their taking the initiative to participate in the program) or that WIL, as asserted in the literature, can enhance learning outcomes by bringing to life otherwise theoretical scenarios for the learners (Beard 2007). Given that this essay task requires learners to examine recent media articles, often containing ethical business challenges, against theoretical concepts, some further research could be undertaken to determine how learners perceived WIL as affecting theoretical learning; this would be highly useful empirical research that was not explored in this study. It may be concluded, however, that these WIL learners were not disadvantaged in their mainstream capstone assessment task via online delivery of the theoretical content.

The reflective assessment, which was exclusive to the WIL cohort, focused on student expectations of work before and after placement; it had good learner outcomes, with almost half the cohort achieving a Distinction level (75% or above). The assessment design for this task was informed by research on WIL student engagement in online reflection in prior study sessions, and fundamentally based on the premise that reflection is pivotal to enhancing insights and learning (Thorpe 2004) through bolstering learners' academic knowledge, skill development and lifelong learning (Harvey et al. 2010). Again, the findings suggest that reflection facilitated via online assessment, in this case as part of WILCAO, demonstrated strong student performance on assessments.

For the final assessment, which drew upon both theoretical content common to all capstone students and tailored WIL reflection, again 25 of the 51 students achieved a grade of 75% or above, but, for this assessment, 20% of the students achieved over 85%. The theoretical learning was centred around the United Nations Global Compact Principles (Human Rights, Labour, Environment and Anti-corruption), with the students using critical thinking and reflection to examine the day-to-day and strategic activities of their host organisation. Notably, learning was scaffolded by the two prior assessments: a strongly theoretical essay drawing upon the Global Compact Principles together with theoretical principles for ethical and sustainable business, and a reflective piece for which the students situated themselves in the workplace, examining their values and the impact this might have on organisational fit. It is therefore encouraging, but perhaps not surprising, that the drawing together of these two learning elements in this final assessment culminated in overall better student performance on the assessment.

Limitations and future research

More research is needed on how learners perceived WIL as affecting theoretical learning; researchers are thus encouraged to build on this aspect of this study. Also, students' comments implied that they missed peer learning; thus there is an opportunity for further research on Dominguez-Flores and Wang's (2011) concept of "online learning communities" and enhancing peer-to-peer learning, via the web, to enhance theoretical and WIL placement learning. The small sample size, although unavoidable in this particular study, is an unfortunate limitation that, ideally, future studies could address.

Conclusion

Reflecting on Woodley and Beattie (2011), who describe the online as a "de-situated" space that enables students to be engaged in university learning online while being physically in a workplace, suggests that WILCAO was effective in achieving both the university and workplace learner requirements of this final-year capstone subject, and could serve as a manageable alternative to the constraints of attending weekly lectures and tutorials in the classroom. Where higher-education institutions' curriculum and WIL combine, either to respond to the Fair Work Act 2009 or as part of the government impetus to grow WIL across all degrees, WILCAO, which combines theoretical learning and WIL reflective assessment online, emerges as one viable approach.

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